Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-22 (canceled)

Claim 23 (previously presented):   A DIBOC-based ATM switch, comprising:

a plurality of input ports for receiving data units on virtual connections, each input port physically associated with a plurality of data stores and an input control for transmitting "Requests" to release data units;

a plurality of output ports, each output port operatively associated with the plurality of the data stores and physically associated with an output control for monitoring "Requests" to release data units;

a switch fabric for switching data units for any of the input ports to any of the output ports; and

a rate filter adapted to filter data units from the data stores in response to the output controls;

wherein the data stores are arranged to buffer data units for delivery to their associated output port, and the output controls are arranged to monitor the backlog of buffered data units for delivery to their associated output ports, through information transmitted in "Requests" and, if the backlog reaches a particular level, to enforce a rate limitation against additional data units for delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by the rate filter.

Claim 24 (original):   The ATM switch according to claim 23, wherein each data store buffers data units having a distinct priority.

Claim 25 (original): The ATM switch according to claim 23, wherein each of the data units designates a priority and the additional data units which designate relatively high priorities are not in violation of the rate limitation.

Claim 26 (original): The ATM switch according to claim 23, wherein each of the data units designates a priority and the additional data units which designate relatively low priorities are in violation of the rate limitation.

Claim 27 (original): The ATM switch according to claim 23, wherein each of the data units designates a priority and the determination of whether the additional data units which designate relatively low priorities are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 28 (original): The ATM switch according to claim 23, wherein if the backlog falls below the particular level, the output controls are arranged to lift the rate limitation.

Claim 29 (original): The ATM switch according to claim 23, wherein the output controls impose the rate limitation by transmitting congestion control signals to the input controls.

Claim 30 (original): The ATM switch according to claim 28, wherein the output controls lift the rate limitation by transmitting congestion control signals to the input controls.

Claim 31 (original): The ATM switch according to claim 23, wherein each of the data units designates a priority and an input port and the determination of whether the additional data units which designate relatively low priorities and a particular input port are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 32 (original): The ATM switch according to claim 31, wherein the particular input port is associated with a selected store whose backlog caused the rate limitation to be imposed.

Claim 33-54 (canceled)

Claim 55 (previously presented): An ATM switch, comprising:

a plurality of input ports for receiving data units on virtual connections, each of the data units designating a priority;

a plurality of output ports, each output port operatively associated with a plurality of output data stores and an output control;

a switch fabric for switching data units from any of the input ports to any of the output ports;

a rate filter capable of filtering at least one data unit,

wherein the output data stores on an output side of the switch fabric are arranged to buffer data units for delivery to their associated output port, and the output controls are arranged to segregate the data units for storage in the output data stores based on their designated priorities and to monitor the backlog of buffered data units in one or more of said plurality of output data stores for delivery to their associated output ports and, if the backlog reaches a particular level, to enforce a rate limitation against additional data units for delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by said rate filter so that they are not stored in the output data stores.

Claim 56 (previously presented): The ATM switch according to claim 55, wherein the additional data units which designate relatively high priorities are not in violation of the rate limitation.

Claim 57 (previously presented): The ATM switch according to claim 55, wherein the additional data units which designate relatively low priorities are in violation of the rate limitation.

Claim 58 (previously presented): The ATM switch according to claim 55, wherein the determination of whether the additional data units which designate relatively low priorities are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 59 (previously presented): The ATM switch according to claim 55, wherein if the backlog falls below a particular level, the output controls are arranged to lift the rate limitation.

Claim 60 (previously presented): The ATM switch according to claim 55, wherein the data stores are physically associated with output ports.

Claim 61 (previously presented): The ATM switch according to claim 55, wherein the rate limitation is enforced at inputs.

Claim 62 (previously presented): The ATM switch according to claim 55, wherein the rate limitation is enforced at outputs.

Claim 63 (previously presented): An ATM switch, comprising:

a plurality of input ports for receiving data units on virtual connections, each of the data units designating a priority;

a plurality of output ports, each output port operatively associated with a plurality of output data stores and an output control;

a switch fabric for switching data units from any of the input ports to any of the output ports; and

a rate filter capable of filtering at least one data unit,

wherein the output data stores on an output side of the switch fabric are arranged to buffer data units for delivery to their associated output port, and the output controls are arranged to segregate the data units for storage in the output data stores based on their designated priorities and to monitor the backlog of buffered data units in one or more of said plurality of output data stores for delivery to their associated output ports and, if the

backlog buffered in one or more selected stores reaches a particular level, to enforce a rate limitation against additional data units for delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by said rate filter so that they are not stored in the output data stores.

Claim 64 (previously presented): The ATM switch according to claim 55, wherein each output data store buffers data units having a distinct priority.

Claim 65 (previously presented): The ATM switch according to claim 55, wherein each output data store buffers data units having a distinct priority and input port combination.

Claim 66 (previously presented): The ATM switch according to claim 55, wherein the additional data units which designate relatively high priorities are not in violation of the rate limitation.

Claim 67 (previously presented): The ATM switch according to claim 55, wherein the additional data units which designate relatively low priorities are in violation of the rate limitation.

Claims 68-72 (canceled)

Claim 73 (previously presented): The ATM switch according to claim 55, wherein an input port and the determination of whether the additional data units which designate relatively low priorities and a particular input port are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 74 (previously presented): The ATM switch according to claim 73, wherein the particular input port is associated with a selected store whose backlog caused the selective filtering condition to be imposed.

Claim 75 (previously presented): An ATM switch, comprising:

a plurality of input ports for receiving data units on virtual connections, each of the data units designating a priority;

a plurality of output ports, each output port operatively associated with a plurality of data stores and an output control;

a switch fabric for switching data units from any of the input ports to any of the output ports; and

a rate filter capable of filtering at least one data unit,

wherein the data stores are arranged to buffer data units for delivery to their associated output port, and the output controls are arranged to segregate the data units for storage in the data stores based on their designated priorities and to monitor the backlog of buffered data units buffered in two or more of said plurality of data stores for delivery to their associated output ports and, if the backlog reaches a particular level, to enforce a rate limitation against additional data units for delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by said rate filter so that they are not stored in the data stores.

Claim 76 (previously presented): The ATM switch according to claim 75, wherein the additional data units which designate relatively high priorities are not in violation of the rate limitation.

Claim 77 (previously presented): The ATM switch according to claim 75, wherein the additional data units which designate relatively low priorities are in violation of the rate limitation.

Claim 78 (previously presented): The ATM switch according to claim 75, wherein the determination of whether the additional data units which designate relatively low priorities are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 79 (previously presented): The ATM switch according to claim 75, wherein if the backlog falls below a particular level, the output controls are arranged to lift the rate limitation.

Claim 80 (previously presented): The ATM switch according to claim 75, wherein the data stores are physically associated with input ports.

Claim 81 (previously presented): The ATM switch according to claim 75, wherein the data stores are physically associated with output ports.

Claim 82 (previously presented): The ATM switch according to claim 75, wherein the rate limitation is enforced at inputs.

Claim 83 (previously presented): The ATM switch according to claim 75, wherein the rate limitation is enforced at outputs.

Claim 84 (previously presented): An ATM switch, comprising:

a plurality of input ports for receiving data units on virtual connections, each of the data units designating a priority;

a plurality of output ports, each output port operatively associated with a plurality of data stores and an output control;

a switch fabric for switching data units from any of the input ports to any of the output ports; and

a rate filter capable of filtering at least one data unit,

wherein the data stores are arranged to buffer data units for delivery to their associated output port, and the output controls are arranged to segregate the data units for storage in the data stores based on their designated priorities and to monitor the backlog of buffered data units buffered in two or more of said plurality of data stores for delivery to their associated output ports and, if the backlog buffered in one or more selected stores reaches a particular level, to enforce a rate limitation against additional data units for

delivery to their associated output ports, wherein the additional data units in violation of the rate limitation are filtered by said rate filter so that they are not stored in the data stores.

Claim 85 (previously presented): The ATM switch according to claim 84, wherein each data store buffers data units having a distinct priority.

Claim 86 (previously presented): The ATM switch according to claim 84, wherein each data store buffers data units having a distinct priority and input port combination.

Claim 87 (previously presented): The ATM switch according to claim 84, wherein the additional data units which designate relatively high priorities are not in violation of the rate limitation.

Claim 88 (previously presented): The ATM switch according to claim 84, wherein the additional data units which designate relatively low priorities are in violation of the rate limitation.

Claim 89 (previously presented): The ATM switch according to claim 84, wherein the determination of whether the additional data units which designate relatively low priorities are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 90 (previously presented): The ATM switch according to claim 84, wherein if the backlog falls below a particular level, the output controls are arranged to lift the rate limitation.

Claim 91 (new): The ATM switch according to claim 84, wherein the data stores are physically associated with input ports.

Claim 92 (previously presented): The ATM switch according to claim 84, wherein the data stores are physically associated with output ports.

Claim 93 (previously presented):   The ATM switch according to claim 84, wherein the rate limitation is enforced at inputs.

Claim 94 (previously presented):   The ATM switch according to claim 84, wherein the rate limitation is enforced at outputs.

Claim 95 (previously presented):   The ATM switch according to claim 84, wherein an input port and the determination of whether the additional data units which designate relatively low priorities and a particular input port are in violation of the rate limitation is based on a "leaky bucket" algorithm.

Claim 96 (previously presented):   The ATM switch according to claim 84, wherein the particular input port is associated with a selected store whose backlog caused the selective filtering condition to be imposed.